

FS Comments
Draft FS
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Table 1-1

Reference this table.

Page 1-7, Para. 4

Provide a discussion of the distribution of PNAs over the site and in the subsurface.

Page 1-10, Para 2

Provide a geologic cross section of the site. Provide maps which show the features of the site. Features such as the monitoring wells, and various contamination areas of the site should be shown as well as general site features.

Page 2-1, Para. 4

This paragraph implies that the railroad ditch doesn't contain PNAs. However, the detection limits are so high as to potentially mask significant levels. This could significantly affect the assertion that PCP is the driving factor for the railroad ditch remediation. Provide a discussion which addresses this problem.

Discuss the correlation between the levels of PCP and PNAs, and provide references that support this correlation.

Page 3-1, Sect. 3-1

In this section delete the fifth, sixth and seventh paragraphs. Re-write the entire section from the standpoint of achieving a 10^{-6} cancer risk for the carcinogenic compounds found on site, and the leachability approach to groundwater protection.

Figure 3-1

Provide more data points to support this graph.

Section 3-3, General

The sludges present in the railroad ditch are sufficiently similar to K001 to make LDR applicable for these materials. Change the text to reflect this.

Page 3-4, Para. 3

Describe where the analyses for the sludges and soils which show them to be non-characteristic may be found.

Page 3-9, Para. 6

Change this paragraph to read that LDR under RCRA are not applicable at the site.

Page 3-11, Para. 3

This paragraph is not consistent with Agency policy regarding ecosystems. Cricket Springs and the tributary to it are classified by the State of Arkansas as a seasonal fishery. Therefore, all regulations for such a classification must be adhered to. The text should reflect this.

Para. 4

This discussion should state whether any MCLs, water quality criteria or State of Arkansas regulations exist for other contaminants which are found on-site. If they exist they will be ARARs for the remedial action (i.e. during pumping of treatment waters).

Page 4-1, Para. 1

Where is the ash pile included in this listing?

Page 4-13, Para. 1

Reference the appropriate sections of the treatability study.

Para. 2

Develop this section for clarity. It is understood from discussions that there is a problem with the porosity of the coarse fractions and the attrition of the fines. This is not well presented in this report and needs further explanation.

Para. 3 through 8

Provide a more detailed discussion of the results of the treatability studies for the remaining alternatives. Include a short explanation of what "wood removal" is. Include tables similar to Table 4-4 for the other treatability tests.

Page 5-4, Para. 3

Reference where and how the determination was made that the railroad ditch contaminants constitute 40% of the site contaminants. The end of the last sentence does not make sense.

Page 5-7

Indicate that this alternative does not comply with SARA's preference for permanent treatment.

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Page 5-21,22

Remove the sentences regarding "Toxic combustion by-products".

Page 6-2, Para. 1

The definition of affected soils may change as Figure 3-1 changes. Include the ash pile in this definition.

Page 6-7, Para. 2

Have the design specifications been discussed with the railroad? It is very likely that the railroad will not allow a significant excavation close to the rails without some type of support shoring. The requirement for the shoring of the excavation could have a significant effect on the costs of nearly all of the remedies, and should be discussed.

Para. 4

Provide a provision for changing the monitoring frequencies in the event of a statistically significant increase of PCP levels in any of the monitored wells or springs.

Page 6-9, Para. 2

Include in the monitoring program W-11b, W-11a, W-10 and W-9.

Para. 3

Re-write this paragraph to be more strongly supportive of the idea of these monitoring locations as indicative of all of the off-site migration of the contaminants.

Page 6-12, Para. 2

According to the Treatability Study, leaching seems to be a very effective means of reducing the levels of contaminants in all of the size fractions. None of the alternatives included a leaching step as part of the process. Evaluate leaching in conjunction with the sieve and wash alternative as an additional alternative.

According to the Treatability Study, Table 4-4, the removal efficiency for the sands, fines and coarse appear to be fairly good. The second paragraph seems to contradict this table. The results of the soil washing studies should be elaborated and clarified. Why is there no double washing alternative?

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Page 6-24, Para. 1

Include in the discussion of Alternative F the fate of the dioxins and furans.

Could the sludges from the biologic treatment be de-watered and then tested for achieving the treatment goal, and then backfilled? This could reduce the cap area.

Page 6-24, Para 3

Won't recycling the filtrate and supernatant to the sieve and wash water significantly increase the sieve and wash water, and thus decrease its effectiveness?

Page 6-30

Provide the area of the landfill in the design basis.

Page 6-34, Para. 2

Change the interest rate to 5%, according to the EPA guidance EPA/540/G-89/004, "Guidance for Conducting Remedial etc.".

Table 6-9

What is the basis for the \$400/cy for on-site incineration? Provide a reference.

Table 6-10

The cost sensitivity analysis does not address the effect of costing assumptions on the total cost estimates. Revise this analysis to discuss the effect of critical cost assumptions on the cost estimates for each alternative. Discuss the results in the accompanying text.

Sect. 7, General

Re-write this section to follow the "Guidance for Conducting Remedial Investigations etc." Chapter 6. In particular re-order the screening alternatives according to the order presented on page 6-3 of the guidance. Rather than using the system of ++, +, ., etc., use the narrative format as presented in the guidance, and place the information in a table such as the one found on page F-13 of the guidance. Also provide in the introductory section a discussion of the ROD decision process, including the threshold criteria, five evaluation criteria, and the community and state acceptance criteria.

The alternatives should be re-evaluated from the point of view of reducing all site contaminants to a 10^{-4} level. A discussion remediation of the "hotspots" of high contamination to a 10^{-4} level should be discussed.

Page 7-4, Para. 5

Re-write section 7-3 to include quantitative estimates of the reduction in toxicity, mobility and volume for each alternative.

Alternative C does not reduce the toxicity, mobility or volume as well as alternative D or G. In addition alternative C should be placed between alternatives A and B, and alternatives D and G in terms of protection and long term effectiveness.

Page 7-5, Para. 2

Replace the last sentence with a sentence which states that air emissions from the incinerator would be controlled by air pollution control systems. Indicate that this may increase the complexity of implementation, and address this in the implementation discussion of this alternative.

Alternative C isn't as effective over the short term as Alternatives D and G because it leaves high concentrations at the surface while D and G do not.

Page 7-7, Para. 4

Provide a discussion of each of the alternatives as they relate to the other alternatives in terms of cost and cost sensitivities.

Table 7-1

Delete this table and provide an analysis similar to the RI/FS guidance referenced earlier.

Page 8-2, Para. 1

The RI data do not support the contention that natural attenuation is taking place. The data show an increase in the PCP concentrations since 4/88 (1 mg/l) to 6/89 (1.6 mg/l). Re-evaluate the alternatives based on this.

Page 8-4

Develop the discussion to include an estimate of the mass of PCP that may be attenuated with time. Can an estimate of availability of PCP be made?

Page 9-1, Para. 4

Include the results of the serial sampling event in the discussion. Provide a graph which supports the assertion that concentration does not vary with flow rate.

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Section 10

Re-write this section to be in accordance with the earlier cited RI/FS guidance.

Table 10-1

Replace this table with a table similar to the table found on page F-13 of the RI/FS guidance.

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